

Serial No. 09/201,530

Page 2 of 20

IN THE CLAIMS

Please cancel claims 3-5, 11-12, 17, and 19, and amend claims 1, 6, 8, 9, 13-16, 18, and 23 as follows:

1. (Currently Amended) Apparatus for providing demand television comprising:
- a broadcast encoder for encoding a real-time video frame sequence to form a broadcast bitstream;
 - a storage encoder for encoding the real-time video frame sequence to form a plurality of storage bitstreams ~~bitstream~~, wherein said storage encoder comprises:
 - a first encoder for producing a play bitstream that contains information that, when decoded, produces a forward play video frame sequence;
 - a frame subsampler;
 - a buffer, for storing subsampled frames of the real-time video frame sequence;
 - a second encoder for producing a fast forward bitstream that contains information that, when decoded, produces a fast-forward video frame sequence;
 - a third encoder for producing a fast-reverse bitstream that contains information that, when decoded, produces a fast-reverse video frame sequence;
 - and
 - a controller that selects subsampled frames from the buffer and couples selected frames to the second and third encoders;
 - a transmission system for transmitting the broadcast bitstream to subscriber equipment;
 - a storage device for storing the plurality of storage bitstreams ~~bitstream~~, wherein the storage device stores the plurality of storage bitstreams contemporaneously to ~~bitstream at the same time that the transmission system transmitting~~ transmits the broadcast bitstream; and
 - wherein said ~~storage bitstream contains a plurality of bitstream types including at least a play bitstream and a fast forward bitstream, and said fast forward bitstream contains an indicator that delimits the an end of available data such that a transition from said fast forward bitstream to at least one of said broadcast bitstream and said play bitstream is appropriate.~~

281784-1

Serial No. 09/201,530

Page 3 of 20

2. (Original) The apparatus of claim 1 wherein said broadcast encoder is a high data rate encoder.
3. Canceled.
4. Canceled.
5. Canceled.
6. (Currently Amended) The apparatus of claim [[5]] 1 wherein said first encoder is an MPEG encoder that encodes N frames of the video sequence.
7. (Original) The apparatus of claim 6 wherein said second and third encoders are MPEG encoders that encodes N subsampled frames.
8. (Currently Amended) The apparatus of claim [[5]] 1 wherein the controller multiplexes selection of the frames from the buffer to apply a plurality of subsampled frames to said second encoder to form said fast forward bitstream and then apply a plurality of subsampled frames to said third encoder to form said fast reverse bitstream.
9. (Currently Amended) A method for providing demand television comprising the steps of:
- encoding, in real-time, a broadcast video frame sequence to form a broadcast bitstream, while ~~at the same time~~ contemporaneously encoding the broadcast video frame sequence to form a plurality of storage bitstream bitstreams, wherein said plurality of storage bitstreams are contemporaneously formed by the steps of:
 - encoding said frames to form a play bitstream;
 - subsampling said broadcast video frames;
 - buffering said subsampled frames;
 - recalling said buffered frames in a forward time sequence order;
 - encoding said recalled buffered frames to form said fast forward bitstream;
 - recalling said buffered frames in a reverse time sequence order; and
 - encoding said recalled buffered frames to form a fast reverse bitstream;
 - broadcasting the broadcast bitstream to subscriber equipment[[;]] , while contemporaneously storing the plurality of storage bitstream bitstreams within a storage device; and

Serial No. 09/201,530

Page 4 of 20

upon a subscriber selecting to view information previously broadcast by the broadcast bitstream, transmitting to the subscriber the storage bitstream;

wherein said ~~storage bitstream contains a plurality of bitstream types including at least a play bitstream and a fast forward bitstream, and said fast forward bitstream~~ contains an indicator that delimits the end of available data such that a transition from said fast forward bitstream to at least one of said broadcast bitstream and said play bitstream is appropriate.

10. (Original) The method of claim 9 wherein said broadcast bitstream is a high data rate bitstream.

11. Canceled.

12. Canceled.

13. (Currently Amended) The method of claim ~~[[12]]~~ 9 wherein said play bitstream when decoded forms a standard play frame sequence.

14. (Currently Amended) The method of claim ~~[[12]]~~ 9 wherein said fast forward bitstream, when decoded, forms a fast forward frame sequence.

15. (Currently Amended) The method of claim ~~[[12]]~~ 9 wherein said fast reverse bitstream, when decoded, forms a fast reverse frame sequence.

16. (Currently Amended) The method of claim 9 wherein said ~~storage bitstream contains a plurality of bitstream types and said storage bitstream~~ transmitting step further comprises the steps of:

recalling from said storage device a particular bitstream in response to a request for a particular bitstream type from a subscriber terminal;

addressing the requested bitstream to said requesting subscriber;

transmitting said requested bitstream to said subscriber equipment.

17. Canceled.

Serial No. 09/201,530
Page 5 of 20

18. (Currently Amended) The method of claim [[17]] 9 wherein the method further comprises a step of switching from transmitting a fast forward bitstream to transmitting said broadcast bitstream upon reaching the indicator.

19. Canceled.

Claims 20-22 (Canceled).

23. (Currently Amended) A method of providing demand television comprising the steps of:

encoding, in real-time via a first encoder, a broadcast video frame sequence to form a broadcast bitstream, while ~~at the same time~~ contemporaneously encoding, via a second encoder, the broadcast video frame sequence to form a storage bitstream;

transmitting said broadcast bitstream to a plurality of subscriber equipment for decoding;

storing said broadcast bitstream as a storage bitstream while said broadcast bitstream is being transmitted;

upon said subscriber equipment requesting said storage bitstream to enable review of information contained in said broadcast bitstream, transmitting said storage bitstream to said subscriber having requested the storage bitstream;

wherein said storage bitstream comprises at least a play bitstream and a fast forward bitstream, and upon said fast forward bitstream being exhausted of data, automatically switching from said storage bitstream to said broadcast bitstream.

24. (Previously Presented) A method of providing demand television comprising the steps of:

encoding, in real-time via a first encoder, a broadcast video frame sequence to form a broadcast bitstream, while contemporaneously encoding, via a second encoder, the broadcast video frame sequence to form a storage bitstream;

transmitting said broadcast bitstream to a plurality of subscriber equipment for decoding;

storing said broadcast bitstream as a storage bitstream while said broadcast bitstream is being transmitted;

upon said subscriber equipment requesting said storage bitstream to enable review of information contained in said broadcast bitstream, transmitting said storage bitstream to said subscriber having requested the storage bitstream; and

261784-1

Serial No. 09/201,530

Page 6 of 20

upon said subscriber equipment requesting said broadcast bitstream, switching from said storage bitstream to said broadcast bitstream.

25. (Previously Presented) The method of claim 19, wherein said storage bitstream comprises at least a play bitstream and a fast forward bitstream, and upon said fast forward bitstream being exhausted of data, automatically switching from said storage bitstream to said broadcast bitstream.

26. (Previously Presented) The method of claim 23 wherein said storage bitstream comprises a fast reverse bitstream.

27. (Previously Presented) The method of claim 23, wherein upon said subscriber equipment requesting said broadcast bitstream, switching from said storage bitstream to said broadcast bitstream.

261784-1